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129 Ashman Street  
Midland, MI 48640

989.837.3790  
888.866.4638 toll-free  
989.837.3780 fax

www.mercury.net  
support@mercury.net

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Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, S.W.  
Washington, D.C. 20554

Re: TV White Spaces  
ET Docket Nos. 04-186 and 02-380

Dear Ms. Dortch:

My company, Mercury Network Corporation, provides fixed wireless broadband service to thousands of subscribers in mid-Michigan and northeast Wisconsin. We rely primarily on unlicensed spectrum to deliver broadband services to customers that have few, if any, broadband choices. We built our network from scratch using devices authorized under Part 15 rules the FCC adopted to open up 900 MHz, 2.4 GHz and 5 GHz spectrum for unlicensed broadband devices. Thanks to the Commission's initiatives, many consumers in our service area can now get broadband service.

Mercury Network is very interested in utilizing television white spaces so that we can expand and improve services and coverage. Please allow me a brief explanation of why this spectrum is so valuable to us. When we arrive to install service for a customer, we try to use 5 GHz first, as the noise floor is lowest and the amount of spectrum is most plentiful. If there is any foliage encroaching the RF path, it won't work, and so we try 2.4 GHz. 2.4 GHz will usually penetrate through one or two trees, and usually overcome the noise caused by wireless routers and cordless phones. However, if 2.4 GHz doesn't work, we try 900 MHz. The spectrum is scarce (only 26 MHz total), and is filled with sources of interference, everything from baby monitors to municipal water meter reading systems. And yet, 50% of our subscribers are running on this precious resource. Unfortunately, the interference is always getting worse, and at some repairs, we have no option but to pull down our equipment and leave a customer disconnected from broadband, with no choice but dial-up, or maybe satellite. To me, television white space opens up an opportunity to reclaim lost customers, deliver broadband to new consumers who our 900 MHz signals cannot reach, and improve service to all customers with the availability of new spectrum. We are committed to deploying as soon as equipment for point-to-multipoint service is commercially available.

I am pleased that the FCC will be acting on TV white space petitions for reconsideration in the near future. There are several proposals that would help us to deploy service:

First, the FCC should allow WISPs to operate using base station antennas mounted higher than 30 meters, and we should be allowed to install customer antennas (CPE) at heights below 10 meters. If we could increase our base station antenna height to 100 meters, we could cover three times more area with a base

station and reduce our equipment, tower acquisition and tower lease fees by a large amount – an amount that could be the difference between deploying and not deploying in an area. We support the WISPA and Motorola proposals to increase base station height. By removing any minimum CPE height restrictions, we would not have to put tall masts on residences and we would be able to provide service at a lower cost.

Second, we believe we should be allowed to operate with power in excess of 4 Watts EIRP in rural areas. As is the case with tower height, operating with higher power will give us a greater coverage area and we will not need to spend as much money on infrastructure.

Third, we are very concerned about a proposal made by FiberTower and others to license white space spectrum for point-to-point wireless backhaul. Not only would adopting this proposal take six channels (36 MHz) and perhaps more channels away from us, but WISPs also would have to protect these licensed links. Moreover, channels and areas far beyond the links would be blocked because the signals from the licensed links would overshoot the path and the endpoints. This is due to the low-cost, low-gain antennas FiberTower wants to use. We also would not deploy if a licensed point-to-point user could come along later and put us out of business with a licensed link. We support the views expressed by WISPA in their September 8 letter and ask the FCC to reject the FiberTower proposal.

I thank you for your time and careful consideration. This spectrum represents a significant opportunity to bring broadband millions of Americans who cannot get broadband today. I hope that you will make your decision with the goal of bringing broadband to the millions of rural, unserved.

Sincerely,

David Sovereign  
President